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**Purdue report details Indiana coal use, needs**

WEST LAFAYETTE, Ind. - A new report being released this week details Indiana's coal consumption and suggests the state could boost its economy by importing less coal from other states and investing in "coal gasification" facilities designed to use Indiana coal.

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The Indiana Center for Coal Technology Research in Purdue University's Energy Center is releasing its 2009 Indiana Coal Report on Thursday (March 5) during the center's advisory panel meeting in Indianapolis.

"The report identifies ways to help Indiana create jobs and boost incomes by producing more of the energy the state needs from its own natural resources while encouraging conservation and energy efficiency," said Jay Gore, director of the Energy Center, which is part of the university's Discovery Park.

About \$25.3 billion is spent per year in Indiana for residential, commercial, transportation and industrial energy uses.

"Of that amount, about \$1.4 billion is from domestic sources, which means about 23.9 billion Hoosier dollars - or \$65.5 million per day - is leaving the state for the purpose of purchasing energy," Gore said. "The challenge is to keep overall energy cost relatively low while working to retain more of the capital that has been used to bring energy into the state. To do so, we must focus on domestic energy production and not export capital to import energy into the state."

The report is expected to be extensively used and cited by Indiana officials and nationwide.

"We anticipate it being a reference work for coal-related activities and projects in Indiana and, therefore, contributing to the shaping of Indiana state policy on energy planning and environmental standards," said Marty Irwin, director of the Center for Coal Technology Research.

The 189-page report discusses various issues surrounding the state's energy needs and details coal consumption in Indiana, showing that about half of the coal is mined in Indiana and the rest is imported from other states.

"The report is part of the Energy Center's support for important concepts that include responsible carbon dioxide control and sequestration, as well as entrepreneurial renewable energy technologies designed for carbon dioxide management to address the atmospheric buildup and resulting climate changes," Gore said.

One of the issues covered in the report is a process called

underground coal gasification, a form of energy production.

"Indiana possesses deep unmineable stores of coal that would be ideal for underground coal gasification but are otherwise not economical to use with conventional methods," Irwin said. "The center has been very active in exploring the potential for underground coal gasification in recent months."

An environmental advantage of underground coal gasification is that it would enable the state to more efficiently capture and process carbon dioxide.

Another new report prepared for the center pinpoints promising sites in Indiana for underground coal gasification operations. The method converts coal into a gas for electricity generation, production of chemicals and plastics, and fuels for cars, trucks and aircraft.

That report identifies sites for potential operations in Knox, Gibson, Vanderburgh, Warrick and Posey counties. A follow-up study is required to provide more detailed information about the sites and to perform geological, chemical and engineering evaluations, said Arvind Varma, Purdue's R. Games Slayter Distinguished Professor of Chemical Engineering and head of the School of Chemical Engineering.

Researchers from Purdue and the Indiana Geological Survey prepared the report.

"Coal gasification appears to be the technology best suited for the conversion of Indiana coal into a clean fuel for power production, the feedstock for substitute natural gas or the creation of liquid fuels," Gore said.

Although underground coal gasification was invented decades ago, it has not seen widespread commercial application except in the former Soviet Union. The coal gasification process is usually performed in metal reactors called "gasifiers," which are placed above ground. However, such gasifiers require the coal to be mined, transported and stored, whereas underground gasification is performed directly in the ground, eliminating these steps, Varma said.

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**Note to Journalists:** The meeting is open to journalists and will be held at the Indiana Government Conference Center auditorium in Indianapolis from 9 a.m. to 5:15 p.m. An electronic copy of the report is available from Emil Venere, (765) 494-4709, [venere@purdue.edu](mailto:venere@purdue.edu), or Phillip Fiorini, (765) 496-3133, [pfiorini@purdue.edu](mailto:pfiorini@purdue.edu)

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